

MBR1020 THRU MBR10150

10.0 AMP SCHOTTKY BARRIER RECTIFIERS



FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Epitaxial construction
- * Lead Free Finish/RoHS Compliant

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: As Marked
- * Mounting position: Any
- * Weight: 1.81 grams

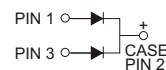
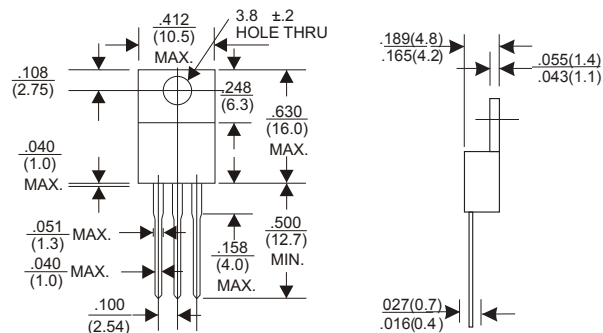
VOLTAGE RANGE

20 to 150 Volts

CURRENT

10.0 Ampere

TO-220AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	MBR1020	MBR1030	MBR1040	MBR1050	MBR1060	MBR1080	MBR10100	MBR10150	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	50	60	80	100	150	V
Maximum RMS Voltage	14	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	20	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current	10								A
See Fig. 1									
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	150								A
Maximum Instantaneous Forward Voltage per Leg at 5.0A	0.65			0.75		0.85		0.90	V
Maximum DC Reverse Current Ta=25°C	500								uA
at Rated DC Blocking Voltage Ta=100°C	100								mA
Typical Junction Capacitance (Note1)	700					460			pF
Typical Thermal Resistance R JC (Note 2)	100								°C/W
Operating Temperature Range Tj	-65 — +125					-65 — +150			°C
Storage Temperature Range TSTG	-65 — +150								°C

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Case.

RATING AND CHARACTERISTIC CURVES (MBR1020 THRU MBR10150)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

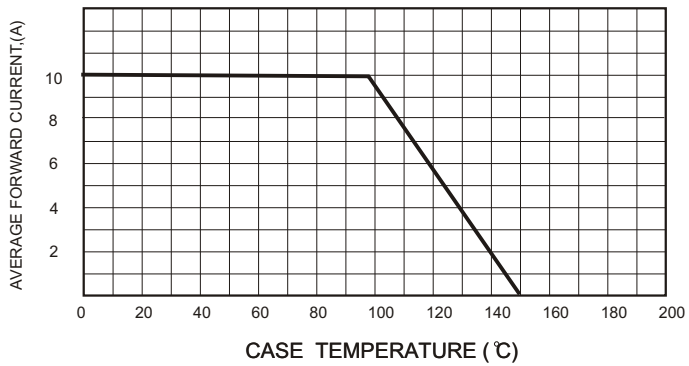


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

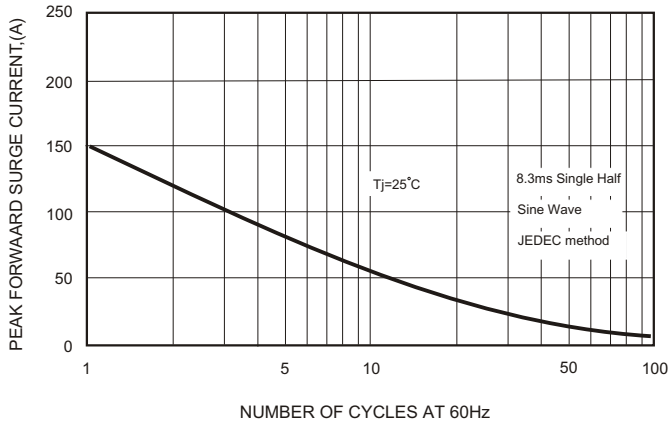


FIG.4-TYPICAL JUNCTION CAPACITANCE

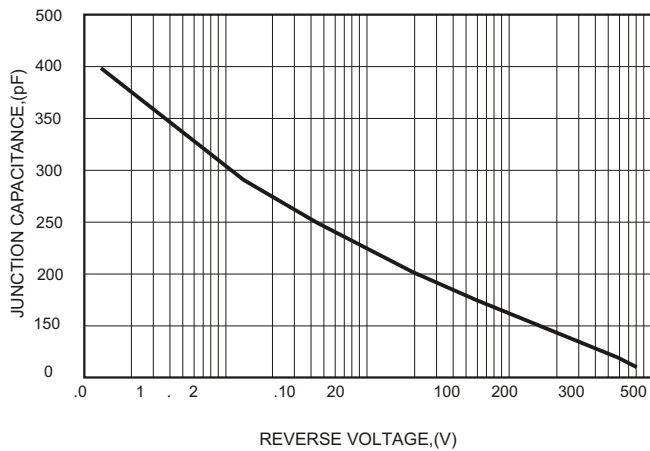


FIG.2-TYPICAL FORWARD CHARACTERISTICS

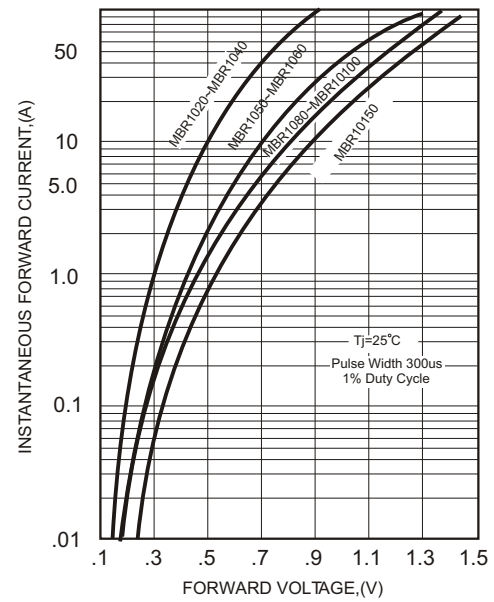


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

